

APR 17 2007

Application No.: 10/823,451

Docket No.: JCLA12897

REMARKS**Present Status of the Application**

The FINAL Office Action rejected claims 8-12 and 27-28 under 35 U.S.C. 102(b) as being anticipated by Pietrzyk (U. S. Patent 6,312,112). Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pietrzyk in view of Mizutani (U. S. Patent 6,659,594). Applicants have amended independent claims 8, 27 and 28 to improve clarity. Claims 8-13 and 27-28 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of the claim rejection under 35 USC 102

The Office Action rejected claims 8-12 and 27-28 under 35 U.S.C. 102(b) as being anticipated by Pietrzyk. Applicants have amended claims 8, 27 and 28 and respectfully traverse the rejections for at least the reasons set forth below.

1. As stated in previous response, the collecting room, such as the collecting room 238 in FIG. 5, is formed from the ink chamber wall but not from the ink channel 232. Applicants have amended independent claims 8, 27, and 28 to improve clarity without adding new limitation without raising new issue.

2. As clearly shown in FIG. 4 and FIG. 5 of the present invention, at least one of the chamber walls 236 has the collecting room 238. As known by a person having ordinary skill in the art of printhead technologies, *the ink channel is used for providing or guiding ink flowing*

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from a ink slot or a ink via to the corresponding ink chamber, while the ink chamber is the region that ink is to be heated by the heater to create a gas phase bubble of ink that can be forced out of the nozzle. The function of the ink channel is different from that of the ink chamber. In the embodiments of the present invention, the collecting room 238 is formed from one chamber wall as a part of the ink chamber 234. Therefore, the collecting room 238 can be recognized as a part of the ink chamber 234. The collecting room 238 is separate from the ink channel 134. In other words, the collecting room 238 is only formed from the ink chamber and is not part of the ink channel 134. The collecting chamber can collect bubbles and/or impurities, which can be within ink or generated after ink-jetting operation, for example.

3. In re Pietrzyk, the ink chamber 46 is shown in Fig. 4 and Fig. 5. Two ink channels 66 and 68 in asymmetry are formed to feed ink into the ink chamber 46. The asymmetric portion of the channel is considered as the concave portion as a collection room of the present invention by the Examiner (see drawing by the Office Action in Page 3). However, as clearly disclosed by Pietrzyk, the ink chamber is element 46, while the asymmetric portion of the ink channel 68 pointed in page 2 of the Office Action is indeed a part of the ink channel but not a part of the ink chamber. The asymmetric portion does not form the collecting room of the present invention, either.

In operation mechanism, it should be noted that the two channels in asymmetry disclosed in Pietrzyk are to collapse the drive bubbles into evenly distribution (col. 3, lines 48-51) but not for collecting the bubbles and/or impurities as did in the present invention. The concave portion of the element 68 pointed by Examiner is not and cannot and shall not be serving as the

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collecting room for the function of collecting the bubble and/or impurities since it is a part of the ink channel as clearly defined and disclosed as the ink channel in Pietrzyk and is used to direct ink from the ink slot to the ink chamber 46 and cannot be used to collect the bubble and/or impurities because, in doing so, it will block the flow of the ink in the ink channel 68 which will adversely influence the printing quality. As clearly disclosed and taught in the embodiments of the present invention, the bubble and/or impurities collected in the collecting room would not block the flow of the ink in the ink channel 232 and will not adversely influence the printing quality since the collecting room is not part of the ink channel but a part of the ink chamber.

Further, the design of two channels in Pietrzyk is to allow one channel to still refill the chamber 46 while another channel is blocked with a particle (col. 3, lines 52-54). This is the additional evidence in different mechanism from the present invention.

4. For at least the foregoing reasons, Pietrzyk does not disclose the collecting room of the present invention that is clearly disclosed from the accompanying drawings and specification and particularly pointed out by the limitation of claims 8-12 and 27-28.

Discussion of the claim rejection under 35 USC 103

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pietrzyk in view of Mizutani. Applicants respectfully traverse the rejections.

5. With at least the same foregoing reasons applied to independent claim 8, Pietrzyk failed to disclose the collecting room.

In re Mizutani, Mizutani may disclose the positions of the ink ejecting ports. However,

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Mizutani never considers the chamber with the collecting room, either. In this manner, Mizutani does not disclose the position of the nozzle above the collecting room as recited in dependent claim 13, which also includes the features recited in claim 8.

For at least the foregoing reasons, claim 13 is distinguishable over the prior art references, as well.

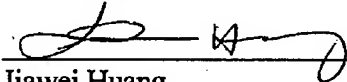
CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 8-13 and 27-28 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Date: 4/17/2007

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